

ABSTRACT OF THE DISCLOSURE

A Booth encoder and partial products generator circuit may be provided. The Booth encoder circuit may include a plurality of transistors to receive a plurality of multiplier bits and complements of the plurality of multiplier bits. The Booth encoder circuit may also include a plurality of logic gates (or circuits) coupled to ones of the plurality of transistors to output Booth encoded signals. The partial products generator circuit may include a first multiplexing device having a plurality of first transistors to receive the Booth encoded signals and to provide a first partial products output, and a second multiplexing device having a plurality of second transistors to receive the Booth encoded signals and to provide a second partial products output. The second multiplexing device further to receive multiplexed data from the first multiplexing device when providing the second partial products output.